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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT

PAPER NUMBER

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/615,019

Applicant(s)

KIRKMAN, GEORGE F.

Examiner

Khanh V. Nguyen

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2000.
- 2a) ☐ This action is **FINAL**.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 12-14, 18 and 19 is/are allowed.
- 6) ☐ Claim(s) 1, 2, 4-11 and 15-17 is/are rejected.
- 7) ☐ Claim(s) 3 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2000 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other.

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the *third attenuator* in claims 9, 16 and *the second limiter in claims 10, 17* must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 8-10 and 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the predistortion network (42) is disposed in the high temperature zone and not the TWT (44) as claimed.

Regarding claims 8 and 15, it is unclear which *transmission line* is intended.

Regarding claims 9 and 16, it is unclear which *third attenuator* is intended.

Regarding claims 10 and 17, it is unclear which *second limiter* is intended.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by applicat admitted PRIOR ART.

Regarding claim 1, PRIOR ART (Fig. 1) discloses a traveling wave tube circuit comprising: a predistortion network (14) coupled to the traveling wave tube (18) via RF amplifier (16); an amplifier (12); and a line connecting amplifier (12) to the predistortion network (14) may be read as a connecting cable.

Regarding claim 2, PRIOR ART (Fig. 1) discloses RF amplifier (12) disposed in a low temperature zone.

Regarding claim 11, PRIOR ART (Fig. 1) discloses RF amplifiers (12 and 16) connected in series.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant admitted PRIOR ART.

Regarding claims 4, 6, 7, PRIOR ART discloses the claimed invention except for a limiter, an attenuator and a phase shift disposed in a predistortion network. Reisner et al. (Fig. 1) disclose a predistortion linearizer (20) which may be read a predistortion network comprising limiter (50), an attenuators (44 and 54) and phase shifts (46 and 56). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the predistortion linearizer of Reisner et al., since such would be a matter of design option and therefore would produce no unexpected results.

Regarding claim 5, PRIOR ART discloses the claimed invention except for the predistortion network has a range between 11 to -3dBm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the predistortion network within the specified range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art.

Allowable Subject Matter

Claims 12-14, 18 and 19 are allowed.

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following U.S. Patents contain teaching of a traveling wave tube amplifier:

Radermacher et al. U.S. Patent 4,701,717

Katz et al. U.S. Patent 5,015,965

Greblunas et al. U.S. Patent 5,523,716

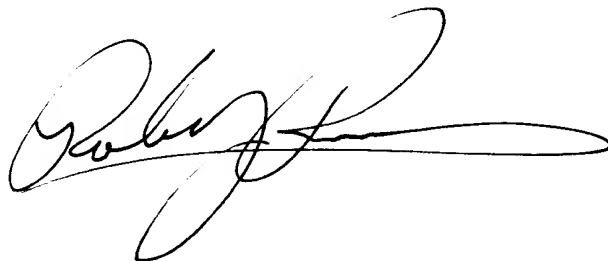
Yuen et al. U.S. Patent 5,966,049

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh V. Nguyen whose telephone number is (703) 306-9058. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (703) 308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-0142 for regular communications and (703) 305-0142 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3432.

KDV



05/02/01